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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,565	10/30/2003	Masahiro Sato	50212-548	5902

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EXAMINER	
WOOD, KEVIN S	

ART UNIT	PAPER NUMBER
2874	

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/696,565	SATO, MASAHIRO	
	Examiner	Art Unit	
	Kevin S. Wood	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 14-19* is/are rejected.

7)☒ Claim(s) *12,13 and 20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

NON-FINAL REJECTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-11 and 14-18 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,787,215 to Kuhara et al.

Referring to claim 1, the Kuhara et al. reference discloses all the limitations of the claimed invention. The Kuhara et al. reference discloses an optical module, including: a semiconductor light-emitting device (273) having a light-emitting surface for emitting light; and a semiconductor light-receiving device (264) having a light incident surface for receiving the light emitted from the light-emitting surface of the semiconductor light-emitting device, a light-absorbing layer (94) for absorbing a part (λ_1) of the light incident from the light incident surface, and a light-emitting surface for emitting light (λ_2) transmitted through the light-absorbing layer, wherein the optical module outputs the light emitted from the light-emitting surface of the semiconductor light-receiving device. See Fig. 39-42B, along with their respective portions of the specification. The details of the semiconductor light-emitting device are shown in Fig. 38, while the details of the semiconductor light-receiving device are shown in Fig. 16.

Referring to claims 2 and 3, the Kuhara et al. reference discloses all the limitations of the claimed invention. The Kuhara et al. reference discloses the semiconductor light-emitting device (273,325) further comprises an active layer (316), wherein the active layer and the light-absorbing layer (94) include the same III-V compound semiconductor. The Kuhara et al. reference discloses that semiconductor to be InGaAsP. See Fig. 38 (light-emitting device) and Fig. 16 (light-receiving device), along with their respective portions of the specification.

Referring to claim 4, the Kuhara et al. reference discloses all the limitations of the claimed invention. The Kuhara et al. reference discloses the semiconductor light-receiving device (Fig. 16) further comprises a cap layer (93) made of InP provided on the light-absorbing layer (94) and a substrate (92) made of InP. See Fig. 16, along with its respective portion of the specification.

Referring to claim 5, the Kuhara et al. reference discloses all the limitations of the claimed invention. The Kuhara et al. reference discloses that the thickness of the light-absorbing layer (94) is 5 μm. See Fig. 16, along with its respective portion of the specification.

Referring to claim 6, the Kuhara et al. reference discloses all the limitations of the claimed invention. The Kuhara et al. reference discloses an optical module, including: a semiconductor light-emitting device (70) having a light-emitting surface for emitting light; and a semiconductor light-receiving device (64) having a light incident surface for receiving the light emitted from the light-emitting surface of the semiconductor light-emitting device, a light-absorbing layer (94) for absorbing a part (λ_1) of the light incident

from the light incident surface, and a light-emitting surface for emitting light (λ_2) transmitted through the light-absorbing layer, wherein the optical module outputs the light emitted from the light-emitting surface of the semiconductor light-receiving device. See Fig. 21A, along with their respective portions of the specification. The Kuhara et al. reference discloses an optical fiber (63) having an end optically coupling to the light-emitting surface of the semiconductor light-receiving device (64), wherein the light emitted from the light emitting surface of the semiconductor light-receiving device is outputted through the optical fiber. See Fig. 11 and Fig. 12, along with their respective portions of the specification. The details of the semiconductor light-emitting device are shown in Fig. 38, while the details of the semiconductor light-receiving device are shown in Fig. 16.

Referring to claim 7, the Kuhara et al. reference discloses all the limitations of the claimed invention. The Kuhara et al. reference discloses the optical module, further comprising: a lens (126) for condensing the light emitted from the light-emitting surface of the semiconductor light-receiving device (64) to the end of the optical fiber (62); a lens holder (124) for holding the lens; a stub (136) for securing the optical fiber, the stub having an end surface and another surface, the end of the optical fiber being exposed at the end surface of the stub; a stem (111) for mounting the semiconductor light-emitting device and lens holder; and wherein the optical fiber has another end exposing at a the another surface of the stub and the light emitting from the light-emitting surface of the semiconductor-light receiving device is outputted from another end of the optical fiber. See Fig. 21A of the reference, along with its respective portion of the specification.

Referring to claims 8 and 9, the Kuhara et al. reference discloses all the limitations of the claimed invention. The Kuhara et al. reference discloses the semiconductor light-emitting device (273,325) further comprises an active layer (316), wherein the active layer and the light-absorbing layer (94) include the same III-V compound semiconductor. The Kuhara et al. reference discloses that semiconductor to be InGaAsP. See Fig. 38 (light-emitting device) and Fig. 16 (light-receiving device), along with their respective portions of the specification.

Referring to claim 10, the Kuhara et al. reference discloses all the limitations of the claimed invention. The Kuhara et al. reference discloses the semiconductor light-receiving device (Fig. 16) further comprises a cap layer (93) made of InP provided on the light-absorbing layer (94) and a substrate (92) made of InP. See Fig. 16, along with its respective portion of the specification.

Referring to claim 11, the Kuhara et al. reference discloses all the limitations of the claimed invention. The Kuhara et al. reference discloses that the thickness of the light-absorbing layer (94) is 5 μm. See Fig. 16, along with its respective portion of the specification.

Referring to claim 14, the Kuhara et al. reference discloses all the limitations of the claimed invention. The Kuhara et al. reference discloses an optical bench (328) including a region providing the semiconductor light-receiving device (264) and a second region providing the semiconductor light-emitting device (325), and a package (326) including a base for mounting the optical bench and a first member having an optical window (337) the optical bench being enclosed in the package, wherein the light

emitted from the light-emitting surface of the semiconductor light-emitting device is outputted through the optical window. See Fig. 41, along with its respective portion of the specification.

Referring to claims 15 and 16, the Kuhara et al. reference discloses all the limitations of the claimed invention. The Kuhara et al. reference discloses the semiconductor light-emitting device (273,325) further comprises an active layer (316), wherein the active layer and the light-absorbing layer (94) include the same III-V compound semiconductor. The Kuhara et al. reference discloses that semiconductor to be InGaAsP. See Fig. 38 (light-emitting device) and Fig. 16 (light-receiving device), along with their respective portions of the specification.

Referring to claim 17, the Kuhara et al. reference discloses all the limitations of the claimed invention. The Kuhara et al. reference discloses the semiconductor light-receiving device (Fig. 16) further comprises a cap layer (93) made of InP provided on the light-absorbing layer (94) and a substrate (92) made of InP. See Fig. 16, along with its respective portion of the specification.

Referring to claim 18, the Kuhara et al. reference discloses all the limitations of the claimed invention. The Kuhara et al. reference discloses that the thickness of the light-absorbing layer (94) is 5 μm. See Fig. 16, along with its respective portion of the specification.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,787,215 to Kuhara et al.

Referring to claim 19, the Kuhara et al. reference discloses the package (326) further encloses a driver (341,346) for electrically driving the light-emitting device (325), and the optical bench (328) further including a third region for providing the driver. See Fig. 41 and Fig. 42A. The Kuhara et al. reference does not appear to specifically disclose the first region, the second region, and the third region arranged in this order along a predetermined axis. However, the application does not appear to disclose the criticality of this claimed arrangement. It would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange the first region, second region and third region in order along an axis, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

Allowable Subject Matter

5. Claims 12, 13, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin S. Wood whose telephone number is (571) 272-2364. The examiner can normally be reached on Monday-Thursday (7am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B. Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin S. Wood
Patent Examiner